



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,571	11/12/2001	Denis Vincent	2-1034-061	8257

803 7590 12/18/2002

HENDERSON & STURM LLP
1213 MIDLAND BUILDING
206 SIXTH AVENUE
DES MOINES, IA 50309-4076

EXAMINER

WILKINS III, HARRY D

ART UNIT	PAPER NUMBER
----------	--------------

1742

DATE MAILED: 12/18/2002

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/054,571

Applicant(s)

VINCENT, DENIS

Examiner

Harry D Wilkins, III

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/460,471.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-4 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-9 of U.S. Patent No. 6,342,182.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 7 of US 6,342,182 is within the scope of the present claim 1. Present claim 1 recites a gray gold alloy containing Au, Pd and Cu, with the balance being at least one element selected from a list that includes Ti. This composition is met by claim 7 of US 6,342,182. Therefore, present claim 1 is obvious in view of claim 7 of US 6,342,182. Please see *In re Malagari* 182 USPQ 549 and MPEP 2144.05. Present claims 2 and 3 directly correspond to claims 8 and 9 in US 6,342,182. Regarding present claim 4, the scope of claim 4 is within the scope of claim 7 in US 6,342,182. US 6,342,182 teaches a range of Pd that overlaps the present range and the ranges of Ag

Art Unit: 1742

and Zn can be zero in the presently pending claims. US 6,342,182 teaches that Ti is present at 20-200 ppm (0.002-0.02 wt%).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Linker et al (CH 684616).

Linker et al teach a gray gold alloy. The alloy contains (see claim 1) 75-76% Au, 5.5-18% Pd, 2-12% Mn (where Pd+Mn is 15-22%) and the balance Ag and/or Cu. This composition overlaps the presently claimed range of composition at 75-76% Au, 5.5-14% Pd, and 7-10% Cu. (The content of Cu would be 2-10%. 2%-maximum Au and maximum Pd+Mn totals 98%. 10%-minimum Au and minimum Pd+Mn totals 90%.) The alloy of Linker et al is free from Ni, Co and Fe. Regarding the presence of Mn in the alloy of Linker et al, the present claim recites an alloy "comprising" a list of elements, and this language is read to leave the composition open to other elements, even in major amounts. Regarding the limitation that the amounts of Cu and Pd are inversely related, one of ordinary skill in the art would have considered the composition to meet this limitation because as more Pd was added, there would be less weight left in the composition for Cu, thus, creating an inverse relationship.

5. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman et al (US 2,980,998).

Coleman et al teach a gold alloy (see col 2, lines 20-26) that contains 70-90 wt% Au, 3-12 wt% Pd, 5-10 wt% Cu and the balance being 0.5-4 wt% Zn or In. The range of Au is broader than the presently claimed range. However, it would have been within the expected skill of a routineer in the art to have optimized the composition for the purpose of obtaining the proper strength (for support, see col 2, lines 29-44). The ranges of Pd, Cu and Zn/In overlap the presently claimed range. See *In re Malagari* 182 USPQ 549 and MPEP 2144.05. The alloy of Coleman et al is free from Ni, Co and Fe. Regarding the limitation that the amounts of Cu and Pd are inversely related, one of ordinary skill in the art would have considered the composition to meet this limitation because as more Pd was added, there would be less weight left in the composition for Cu, thus, creating an inverse relationship.

Regarding claim 2, the range of Pd and Cu taught by Coleman et al overlap the presently claim range. It would have been within the expected skill of a routineer in the art to have selected, Zn and In within the range of 0.5-4.0 wt% to be 1-4 wt% In and 0.01-4 wt% Zn in order to optimize the strength and melting point of the alloy (see col 2, lines 29-44).

Regarding claim 4, the range of Pd taught by Coleman et al is broader than the claimed range. However, it would have been within the expected skill of a routineer in the art to have optimized the composition for the purpose of obtaining the proper strength and melting point (for support, see col 2, lines 29-44).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman et al (US 2,980,998) as applied to claims 1, 2 and 4 above, and further in view of Steinke et al (US 5,240,172).

The teachings of Coleman et al are described above in paragraph no. 5.

Coleman et al fail to teach that the alloy contains 0.2 to 0.4 wt% Ga.

Steinke et al teaches adding Ga to gold alloys at 0 to 4 wt% for the purpose of lowering the melting range and improving flowability. (See col 3, lines 3-10)

Therefore, it would have been obvious to one of ordinary skill in the art to have added Ga in an amount of 0.2 to 0.4 wt% to the alloy of Coleman et al in order to improve the properties of the alloy of Coleman et al as disclosed by Steinke et al.

7. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto (JP 09-078160) in view of Kashiwagi (JP 09-184033).

Fujimoto teaches (see English abstract) a white gold alloy that contains 75 wt% Au, greater than 10 wt% Pd and greater than 10 wt% Cu. The ranges of Pd and Cu disclosed by Fujimoto overlap the presently claimed ranges. See *In re Malagari* 182 USPQ 549 and MPEP 2144.05. The alloys of Fujimoto and Kashiwagi are free from Ni, Co and Fe.

Fujimoto fails to teach that the balance of the composition is selected from at least one of Ir, In, Ag, Zn, Ga, Re, Zr, Nb, Sn, Ta and Ti.

Kashiwagi teaches (see English abstract) a similar white gold alloy that contains 0.5-5 wt% of at least one of Zn, In and Ir. These elements are added to control the color and also to provide age hardening.

Therefore, it would have been obvious to one of ordinary skill in the art to have added at least one of Zn, In and Ir as taught by Kashiwagi to the alloy of Fujimoto because these elements help control the color of the alloy and provide age hardening.

Regarding the limitation that the amounts of Cu and Pd are inversely related, one of ordinary skill in the art would have considered the composition to meet this limitation because as more Pd was added, there would be less weight left in the composition for Cu, thus, creating an inverse relationship.

Regarding claim 2, the range of Cu overlaps the presently claimed range. It would have been within the expected skill of a routineer in the art to have selected, Zn and In within the range of 0.5-4.0 wt% to be 1-4 wt% In and 0.01-4 wt% Zn in order to optimize the strength and melting point of the alloy (see col 2, lines 29-44). The remainder being Pd, leaves a range of 9-13.99wt%, which range overlaps the presently claimed range.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujimoto (JP 09-078160) in view of Kashiwagi (JP 09-184033) as applied to claims 1 and 2 above, and further in view of Steinke et al (US 5,240,172).

The teachings of Fujimoto in view of Kashiwagi are described above in paragraph no. 7.

Fujimoto in view of Kashiwagi fail to teach that the alloy contains 0.2 to 0.4 wt% Ga.

Steinke et al teaches adding Ga to gold alloys at 0 to 4 wt% for the purpose of lowering the melting range and improving flowability. (See col 3, lines 3-10)

Art Unit: 1742

Therefore, it would have been obvious to one of ordinary skill in the art to have added Ga in an amount of 0.2 to 0.4 wt% to the alloy of Fujimoto in view of Kashiwagi in order to improve the properties of the alloy of Fujimoto in view of Kashiwagi as disclosed by Steinke et al.

9. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kashiwagi (JP 09-184033).

Kashiwagi teaches (see English abstract) an white gold alloy that contains 40-77 wt% Au, 10-20 wt% Cu, 5-15 wt% Ag and the balance Pd, or one where the Ag can be replaced by 0.5-5 wt% of one or more of Zn, In and Ir. Kashiwagi teaches a specific example, #4 in the table on page 3, that contains 75 wt% Au, 10 wt% Pd, 7 wt% Cu, with Ag and In the balance.

Kashiwagi does not expressly teach that the amounts of Cu and Pd are inversely related. However, one of ordinary skill in the art would have considered the composition to meet this limitation because as more Pd was added, there would be less weight left in the composition for Cu, thus, creating an inverse relationship.

Regarding claim 2, the ranges of Pd and Cu taught by Kashiwagi overlap the presently claimed range. It would have been within the expected skill of a routineer in the art to have selected, Zn and In within the range of 0.5-4.0 wt% to be 1-4 wt% In and 0.01-4 wt% Zn in order to optimize the color and age hardening of the alloy (see English abstract).

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kashiwagi (JP 09-184033) as applied to claims 1 and 2 above, and further in view of Steinke et al (US 5,240,172).

The teachings of Kashiwagi are described above in paragraph no. 9.

Kashiwagi fails to teach that the alloy contains 0.2 to 0.4 wt% Ga.

Steinke et al teaches adding Ga to gold alloys at 0 to 4 wt% for the purpose of lowering the melting range and improving flowability. (See col 3, lines 3-10)

Therefore, it would have been obvious to one of ordinary skill in the art to have added Ga in an amount of 0.2 to 0.4 wt% to the alloy of Kashiwagi in order to improve the properties, specifically melting range and flowability, of the alloy of Kashiwagi as disclosed by Steinke et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D Wilkins, III whose telephone number is 703-305-9927. The examiner can normally be reached on M-Th 6:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

ROY KING 
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700